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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,652	03/22/2000	Wen-Chen Su	AVERYRC.SPCPI	9479
7590 08/04/2004				
CASELLA & HESPOS LLP 274 Madison Avenue - Suite 1703 New York, NY 10016			EXAMINER EGAN, BRIAN P	
			ART UNIT 1772	PAPER NUMBER
DATE MAILED: 08/04/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/918,652

Applicant(s)

SU ET AL.

Examiner

Brian P. Egan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,9,11-14 and 21-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,9,11-14 and 21-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****37 CFR 1.132 Declaration***

1. The declaration under 37 CFR 1.132 received by fax on July 26, 2004 is insufficient to overcome the rejection of claims 1-5, 9, and 11-14 based upon the disclosure of Reed (U.S. Patent No. 5,229,212) as set forth in the last Office action.

First, the analysis performed by Ms. Adrian Hulme is not commensurate in scope with the claimed invention. As detailed on page 2 of the declaration, a sample equivalent to that disclosed by Reed was formed by coating an uncoated face stock (Data 70) with a vinyl end-blocked siloxane polymer (Dehesive 451) mixed with a solution of polyethylene oxide (Polyox WSR 301). The sample prepared in accordance with the applicant's invention used the same materials as those used for the comparative Reed example, but without the use of polyethylene oxide. Neither of these samples provide a support layer covering the backing as required by independent claims 1 and 12 (as well as newly added claim 21). As described on page 16 of the applicant's specification, "the support layer is applied to the surface of the substrate and flows into the small pores and openings which make up the surface of the substrate. The support layer preferably comprises a low cost filler material. A wide variety of filler materials may be used in the present invention to form the support layer. The filler material should be selected so that it adheres well to the substrate upon which it is to be coated to quickly seal the porosity of the paper, as will be appreciated by those of skill in the art. Furthermore, the filler material should be capable of being expressed from a dual-die or curtain coating die using the principles outlined below." Therefore, absent demonstration of comparisons between the examples in Reed comprising a support layer (i.e., the clay coat between the

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paper substrate and the silicon layer) and the applicant's invention comprising an intermediate support layer, the declaration fails to be commensurate in scope with the claimed invention.

Second, Reed explicitly discloses that the embodiment comprising a clay coat intermediate support layer exhibits a retention of 54 to 81% of the silicon on the surface of the underlying substrate (Col. 10, lines 14-23). Therefore, even if an uncoated paper substrate coated in accordance with Reeds invention only exhibits silicon retention in the range of 40.5 to 48.1% as detailed in Table 1 (on page 3) of the applicant's declaration, the declaration seemingly ignores Reeds explicit disclosures entailing the use of a clay coated paper substrate.

Third, aside from Reeds disclosure concerning the clay coated paper substrate, the applicant's tests show that Reeds use of a polyethylene oxide thickening agent still results in silicon retention on the surface between 40.5 and 48.1% of the total silicon amount coated on the substrate. This result would seemingly still read on the applicant's claimed limitations in independent claims 1 and 12 since nearly 50% of the silicon remains on the surface and it would have been obvious to one of ordinary skill in the art that the silicone concentration would gradually decrease as one observes each successive micrometer depth below the substrate surface.

For the foregoing reasons, the applicant's 1.132 declaration is not persuasive and fails to overcome the rejection of all pending claims over the disclosure of Reed ('212).

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 9, 11-12, and 21-24 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Reed (#5,229,212).

Reed discloses a multilayer release liner comprising a backing (“paper and paperboard”; Col. 7, lines 49-50), a support layer covering the backing (“precoated with a suitable coating such as clay”; Col. 7, lines 50-52), and a silicone-containing layer covering the support layer (Col. 7, lines 49-50). Reed further discloses that in the preferred embodiment, the silicone release composition is an aqueous dispersion containing from 10 to 98% by weight of a curable silicone, about 1 to 10% by weight of a crosslinking catalyst, and about 0.01 to 30% by weight of a water soluble polyethylene oxide (Col. 4, lines 45-52) – thus, Reed discloses that the solids of the release layer are formed in part of silicone, and depending on the desired end product, may be formed by substantially all silicone (upwards of 98%). Reed discloses functionally equivalent methods to those of the Applicants of applying the silicone layer to the backing layer, including curtain coating (Col. 6, lines 61-66), but note, however, that the method of forming has not been given patentable weight. Reed discloses that the silicone coating is coated with a coat weight as low as possible without sacrificing the efficacy for cost effectiveness (Col. 7, lines 6-8) and that the use of the polyethylene oxide as a “polymeric thickener” in the silicone emulsion has shown enhanced holdout properties --

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“holdout” referring to the amount of the silicone which does not penetrate into the porous substrate and remains on the surface of the substrate to serve as a release coating (Col. 7, line 59 to Col. 8, line 14). Specifically, Reed discloses that the release surface comprises between 54 and 81% of the silicone (see Table 3; Col. 10, lines 14-23). Therefore, since over 50% of the silicone is contained within the release surface, the liner inherently exhibits a non-linear distribution of silicone and the most silicone that may possibly be contained at the first micrometer depth below the release surface is 46% -- thus, the release liner is non-linear throughout the release liner and a lower amount of silicone is present in each successive 1 micrometer depth. This non-linearity is hypothesized to occur based on the polyethylene oxide bonding to hydrogen bonding sites of the substrate and reducing the penetration of the silicone into the substrate (Col. 8, lines 2-4) thereby creating a funnel-like distribution of the silicone such that a substantial amount of the silicone remains at the top and the silicone concentration begins to taper off towards the bottom of the support layer. Ultimately, the release liner is further incorporated into a pressure-sensitive adhesive label construction (Col. 9, lines 9-14).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13-14 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reed (#5,229,212).

Reed teaches a multilayer release liner as detailed above. Reed further teaches that the peel release force is measured with a 140° release test wherein the sheet was pulled on an Instron instrument at 8 inches per minute (Col. 9, lines 16-21). Since the aforementioned testing procedure is not equivalent to that disclosed by the Applicant, it is unascertainable whether the liner in Reed teaches an equivalent release property value to that claimed by the Applicant. Based on the material disclosures along with the functionally equivalent method of forming and anticipation of the high concentration of silicone on the release surface, however, the release force values are inherently the same. Even if not inherently equivalent, Reed teaches that the release properties of the coated paper are a function of the amount of silicone remaining on the surface of the paper (Col. 10, lines 30-33) which may be modified based on the coat weight and composition of the silicone coating. Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified either the coat weight or composition taught by Reed such that the release properties of the liner fell within the Applicant's claimed range, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

### ***Response to Arguments***

6. Applicant's arguments filed June 30, 2004 have been fully considered but they are not persuasive.

The examiner first notes the above analysis provided under the 37 CFR 1.132 declaration section.

Second, the applicant's reliance on the fact that prior art multilayer release liners that are precoated lead to substantial manufacturing inefficiencies and cost penalties is irrelevant. The examiner must reasonably interpret the applicant's claimed invention as broadly as possible, and a clay coating overlying a backing paper readily reads upon the applicant's claimed ""support layer," regardless of whether its economically efficient or otherwise. Furthermore, the applicant has provided no reasoning why the claimed "support layer" is any more economically efficient than the clay coat in Reed. To the contrary, as stated above, page 16 of the applicant's specification states, "the support layer is applied to the surface of the substrate and flows into the small pores and openings which make up the surface of the substrate. The support layer preferably comprises a low cost filler material. A wide variety of filler materials may be used in the present invention to form the support layer. The filler material should be selected so that it adheres well to the substrate upon which it is to be coated to quickly seal the porosity of the paper, as will be appreciated by those of skill in the art. Furthermore, the filler material should be capable of being expressed from a dual-die or curtain coating die using the principles outlined below." The fact that the applicant uses a coated layer as detailed here is seemingly no different than the use of a clay coated layer that accomplishes the same purpose. Finally, secondary considerations such as economic efficiency bear no weight in 35 U.S.C. 102(b) analysis.

Ultimately, although the applicant uses a different process in attaining the end product as claimed, the process bears no relevance on whether the claimed invention is patentable over the product disclosed in Reed. Since the end product of Reed anticipates



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the applicant's claimed invention, the examiner maintains all rejections from the previous office action.


### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Egan whose telephone number is 571-272-1491. The examiner can normally be reached on M-F, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
BPE 7/30/04

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1/12

8/3/04